Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Petition for Rule Making submitted	)	RM-9267
by the Land Mobil Communications	)	
Council	)	

COMMENTS

AMATEUR TELEVISION NETWORK

Michael V. Collis
PO Box 1594
Crestline, CA 92325

May 27, 1998

EXECUTIVE SUMMARY

The Amateur Television Network (ATN) has reviewed LMCC's petition and understands the need for additional spectrum for the Private Radio Service but is opposed to the reallocation of 420 MHz to 430 MHz and 440 MHz to 450 MHz bands.

Other spectrum could be made available to relieve the congestion while protecting incumbent amateur radio and television systems that fully occupy the 420 to 450 MHz band in many cities in the United States.

Amateur Radio & Television operators use the 420 to 450 MHz band for public service during disasters and public events. The loss of this spectrum would severely reduce our ability to provide this service to the community.

The ATN will take this opportunity to give some background about Amateur Television Network. Amateurs helped develop television technology. How amateurs use television for public service across the country. ATN will point out inaccurate facts about amateur radio and amateur television operations as printed in the petition by LMCC.

Amateur Television Network will suggest other alternatives to the reallocation of the 420-430 and 440-450 MHz bands to provide the much needed spectrum that LMCC is asking for in their petition.

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1. The Amateur Television Network ("ATN"), hereby files these comments in response to the petition.

I. INTRODUCTORY STATEMENT

2. The ATN is a group of Amateur Radio Operators that experiment with television technology and use our equipment, repeater network and experience to provide public service. ATN represents the majority of amateur television repeater systems in the South Western United States and is affiliated with several other amateur television groups across the country. Our repeater systems are as follows:

- Santiago Peak, WA6SVT
- Oat Mt., WA6SVT
- San Gorgonio, WQ6I
- Blueridge, WB6VVV
- Santa Barbara, WB9KMO
- Mt. Potosi, KB7BY
- Mt. Palomar, W6NWG
- Loop Canyon, WB6ZVE

All listed repeaters use frequencies in the 420-450 MHz band.

II. AMATEURS HELPED DEVELOP TELEVISION

Amateur television began on the 5 meter amateur band (now TV channel 2) just before the World War II. amateurs helped develop television technology, but soon after television became commercialized, amateurs were limited to the 420 MHz band to experiment. Amateurs developed portable equipment the was used in helicopters and aircraft for disaster and public service communications. Commercial television stations liked the idea of aeronautical television and soon developed their own systems in the ENG band (2 GHz area).

Over this decade amateurs have developed micro size transmitters in the 420 MHz band, this permitted their use in small model aircraft, rockets and robots. One amateur's transmitter was used in the cruse missile program and remotely controlled unmanned (model size) aircraft during the Gulf War to provide pictures of the enemy targets.

Amateurs also use small portable television equipment to make observations of hazardous material disasters possible using robots. A Lake Arrowhead fireman that is also a amateur (Gary Heston W6KVC) built a 426 MHz handheld camera-transmitter that he has used in several disasters including a major train derailment that buried several homes in a San Bernardino California neighborhood in borax. People were trapped and the television pictures helped the officials in the Incident Command Center see what equipment was need to rescue the people before they suffocated in the borax that crushed and buried them alive. The 426 MHz signal from Gary's camera-transmitter was able to penitrate trough the debries to get pictures back to the Command center as Gary crawled into the crushed homes looking for survivors.

III PUBLIC SERVICE USING ATV

Amateurs in many areas of the county use 426.25 MHz as the public service frequency. In the Midwest and Southern States amateurs use television to help locate tornadoes, this is done by taking US government Doppler radar and transmitting the video pictures of the storm cells via the 420 MHz band transmitters to storm watchers that then drive to the storm area and look for tornadoes forming and report them to the command centers.

The 420 MHz band is the best band for this work as buildings and trees absorb the signal much less extent than higher amateur bands, this makes possible the ability to provide early warning needed to protect lives.

Amateur television is used in California during our brush fires to send pictures of the fire(s) back to the command center. We also use it after an earthquake to send pictures back to the command center of damaged bridges, dams, and buildings.

Amateur television is used for non emergency uses too, for the last three decades amateurs send pictures via the 420-450 MHz band of the entire parade route and crowd control to public safety during the Pasadena Tournament of Roses Parade. Many other cities use amateur television for their parades and civic events.

Civil Air Patrol uses amateur television for search and rescue operations, they also use the 420-450 MHz band to get maximum range of transmission.

Jim Stephen KC6A was the first amateur to successfully send pictures to the Space Shuttle on the 420 MHz band, He and other NASA selected amateurs used television to uplink pictures of kids from their school directly to the Space Shuttle so the they could communicate to the astronauts about their science projects.

IV. LMCC INACCURATLY REPORTS AMATEUR TELEVISION

On page 30 of LMCC's petition under section "i. 420-450 MHz" LMCC states that "amateur television is in the 430-440 MHz", although amateur television is this part of the band (434 MHz visual carrier), it is not the only frequency used. 421.25 MHz is used as a television repeater output frequency in most of the country. 426.25 MHz is used for public safety use in many areas of the country. 427.25 MHz is used as a television repeater output in some areas. 439.25 MHz is used for television repeater inputs with the passband extending to 444 MHz.

A review of the American Radio Relay League's "Repeater Directory" under ATV repeaters shows how extensive the use of amateur television is. Amateur simplex and repeater frequencies are listed for every region of the country.

The line "A" near the Canadian boarder and the cities of Buffalo, Columbus, and Detroit's 420 to 430 MHz amateur exclusion zones have limited amateur television to one frequency usually 434 MHz. This has eliminated inband television repeaters within 50 miles of the zones.

In Europe the 420-450 MHz band was reduced to 430-440 MHz many years ago and the result is television operations have been reduced to black and white low resolution pictures with no sound due to the 1.5 MHz allocated to amateur television. The effect is amateur television operations in Europe is almost gone on the 430-440 MHz band. A few European amateurs have experimented with digital compression but the equipment needed is very expensive and is beyond most amateurs budgets.

Public service using amateur television in a reduced band of 430-440 MHz would be

severely crippled.

The 420 to 430 MHz band in many areas of the country is used for point to point links to interconnect voice repeaters in the 440 to 450 MHz band. Some repeater groups have very large systems covering several states. One or two systems out west cover from Canadian boarder to the Mexican border and as far east as Texas and Nebraska. The 420-450 MHz band is a very heavily encumbered band. Private business radio and amateur radio would not work well at all in the same band.

Amateurs have had a good relationship with the military in shared use of the 420-450 MHz band as it is used for radar most of the time by the military and for telemetry on missiles lunched from Vandenburg AFB California and in other areas of the country.

V. ALTERNATIVE SPECTRUM SUGGESTIONS

Amateur Television Network suggests that a better solution to LMCC's request to finding spectrum in the near future would be for the Commission to consider allocating some of the returned analog television spectrum after digital television (DTV) is rolled out.

Another area to consider would be some of the spectrum from NTIA in the 225-400 MHz band.

VI. CONCLUSION

Amateur Television Network encourages the Commission to find a solution to the spectrum needs of the PMRS community, we believe that the 420-430 and 440-450 MHz bands are inappropriate because of the heavily encumbered nature of the band and public service benefits amateurs give for free to the community using

television

and other modes in the 420-450 MHz band.

It should also be noted that the Amateur Radio Service lost 220-222 MHz, 2305-2390 MHz and 1215-1240 MHz from our VHF, UHF & microwave bands in the last 17 years, 112 MHz of total spectrum. Although we got the 902-928 MHz band as soon as commercial operations started operations we lost the use of most of the band in the cities.

Amateur Television Network respectfully requests that the Commission find sound ways to a solution in locating spectrum for the PMRS industry without taking any more Amateur Radio spectrum.

Respectfully submitted,

AMATEUR TELEVISION NETWORK
PO Box 1594
Crestline, CA 92325
(909) 338-6887

Michael V. Collis

Michael V. Collis
Vice President

May 27, 1997

SHERIFF-CORONER DEPARTMENT
COUNTY OF ORANGE
CALIFORNIA

BRAD GATES
SHERIFF-CORONER

SERVING THE UNINCORPORATED AREAS
OF ORANGE COUNTY AND THE CITIES OF:

DANA POINT
LAGUNA HILLS
LAGUNA NIGUEL
LAKE FOREST
MISSION VIEJO
SAN CLEMENTE
SAN JUAN CAPISTRANO
STANTON
VILLA PARK

COMMUNICATIONS

RAUL RAMOS
UNDERSHERIFF

ASSISTANT SHERIFFS
JOHN HEWITT
JERRY KRANS
TIM SIMON
DOUG STORM

May 8, 1998

Mr. Mike Collis
P.O. Box 1594
Crestline, CA 92325

Dear Mr. Collis,

On behalf of OCSD/Communications and the County of Orange, Radio Amateur Civil Emergency Service (OCRACES), I would like to take this opportunity and thank you for your participation in the Baker-to-Vegas Challenge Cup Relay Race.

The County of Orange RACES program is administered by the Orange County Sheriff-Coroner Department. Our volunteer personnel provide their time, talent and expertise in supporting team coordination and emergency communications using amateur radio. We could not do the job without assistance from people like you!

Your valuable assistance helped us in meeting the requirements of our RACES communications team:

- ✓ Designing the 2.4 GHz Wavecoms conversion and assisting in conversions
- ✓ Replacing antennas on Santiago Peak
- ✓ Allowing us to use the ATN repeater network

We hope you had an enjoyable experience, and look forward to working with you again next year.

Sincerely,

Robert A. Stoffel, KD6DAQ
Emergency Communications Coordinator
RACES Program Coordinator

Mike Krueger, KC6ZSF
OCRACES Baker-to-Vegas Coordinator